

Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Claim Rejections - 35 USC § 102

Claims 1, 3-19 and 21-24 stand rejected under 35 USC §102(e) as being anticipated by U.S. Patent No. 6,711,432 (*Krause*) and/or by U.S. Patent No. 7,194,295 (*Vilsmeier*). Withdrawal of the rejection is respectfully requested for at least the following reasons.

As set forth in the reply to the previous Office Action, claim 1 sets forth a method for computer assisted medical navigation, wherein a position of a patient or part of the patient's body is detected ***with the patient being in a position for treatment***. Additionally, ***without removing the patient from the position for treatment***, patient-characteristic, two-dimensional detection data is acquired. Patient specific body structure data then is created using, *inter alia*, the two-dimensional detection data, and the detected position of the patient is assigned to the created patient-specific body structure data. Thus, the method in accordance with the present invention enables not only a patient-specific body structure to be created, but also registration of the body structure data with the patient, thereby saving time.

Krause

In response to applicants' argument that *Krause* does not teach or suggest detecting a position of a patient or a part of the patient's body with the patient being in position for treatment, and without removing the patient from the position for treatment, acquiring patient-characteristic, two-dimensional detection data, the Examiner focuses on the "position detection" aspect of *Krause*. Applicant acknowledges that *Krause* teaches markers are used as a location mechanism. However, and as discussed below, *Krause* does not teach that a position of a patient or part of the patient's body is detected ***with the patient being in a position for treatment***, and ***without removing the patient from the position for treatment***, acquiring patient-characteristic, two-dimensional detection data as claimed.

More specifically, *Krause* discloses three separate phases for treating a patient. In a first phase, a three-dimensional computerized model of the patient's bone is created. In a second phase, the model is provided to a planning computer, and a pre-surgical plan is developed for treating the patient. In a third phase, computer-aided

surgery is performed based on the pre-surgical plan.¹ Regarding the first phase (i.e., creation of the bone model), *Krause* states that conventional techniques for generating such three-dimensional models can be expensive and can require an extended amount of time to perform an MRI/CAT procedure.² To address this problem, *Krause* proposes to generate a three-dimensional bone model using X-ray images and template bone models (as opposed to using MRI/CAT methodologies).³ Once the template bone model according to *Krause* is created, it is provided to planner software to develop a surgical plan.⁴ Then once the bone model and plan have been created, the patient is ready to undergo the actual surgical procedure.⁵

It is not until the third phase that the patient is placed in a position for treatment (which is subsequent to the creation of the bone model). Thus, it is not until this point in time that a position of a patient is detected. However, *Krause* has already acquired the X-ray images prior to placement of the patient in a position for treatment (the x-ray data is acquired to construct the three-dimensional model). Therefore, *Krause* cannot teach detecting a position of the patient or part of the patient's body with the patient in position for treatment, and without removing the patient from the position for treatment, acquiring patient characteristic, two dimensional detection data.

Accordingly, withdrawal of the rejection of claim 1 based on *Krause* is respectfully requested.

Vilsmeier

Claim 1 of the present application recites *projecting* a three-dimensional generic model onto the acquired patient characteristic two dimensional detection data, and adapting the projections of the three-dimensional generic model to the information of the patient-characteristic, two dimensional detection data. Nowhere in *Vilsmeier* is such "projecting" disclosed.

In discussing *Vilsmeier*, the Examiner admits that the reference does not use the term "projecting", but infers that such projecting is disclosed in *Vilsmeier*. In support of this position, the Examiner makes various generalizations regarding *Vilsmeier*, and uses the term "appears" (e.g., *Vilsmeier appears* to follow...; it *appears* that associating includes projection of landmarks...; *Vilsmeier* disclose using DDR which *appears* to

¹ See column 4, line 14-column 5, line 15

² See column 4, lines 20-32

³ See column 5, line 58-column 6, line 9

⁴ See column 8, lines 36-61

⁵ Column 11, lines 36-37

relate to a 2D data-3D model projection; it **appears** that to adapt the model to conform to patient detection data that a projection... would occur).⁶

It is respectfully submitted that a *prima facie* case of anticipation requires a finding much more concrete than simply stating a reference "appears" to teach the claimed features. As pointed out in MPEP §2131, in order to anticipate an invention recited in a particular claim, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." Further, [t]he elements must be arranged as required by the claim." In the instant case, the Examiner has not shown that *Vilsmeier* teaches each and every feature as claimed and, thus, the rejection under 35 USC §102(e) must be withdrawn.

Accordingly, neither *Krause* nor *Vilsmeier* teach each and every feature of claim 1 and, thus, these references do not anticipate claim 1. Therefore, withdrawal of the rejection of claim 1, and the claims dependent therefrom, is respectfully requested.

Unaddressed issues

The absence in this reply of any comments on the other contentions set forth in the Office Action should not be construed to be an acquiescence therein. Rather, no comment is needed since the rejections should be withdrawn for at least the foregoing reasons.

Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,
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⁶ See page 5, last paragraph to top of Page 6 of the final Office Action